

Comparisons of Job Characteristics

Focus Occupation: [Biological Technicians \(19-4021\)](#)

Associated Occupation: [Biological Scientists, All Other \(19-1029\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 95

Focus Occupation: Biological Technicians (19-4021)

Associated Occupation: Biological Scientists, All Other (19-1029)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Biology	3.7	24.4	18.9	<<	Extensive education and/or training may be required
English Language	11.2	18.2	10.5	<<	Extensive education and/or training may be required
Chemistry	4.8	16.4	13.5	<	Expanded education and/or training may be required
Mathematics	9.2	14.7	11.3	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 87

Focus Occupation: Biological Technicians (19-4021)

Associated Occupation: Biological Scientists, All Other (19-1029)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Reading Comprehension	10.7	18.5	14.1	<<	Extensive development of skills in this area may be required
Writing	9.2	16.2	10.1	<<	Extensive development of skills in this area may be required
Science	4.5	16.1	11.2	<<	Extensive development of skills in this area may be required
Critical Thinking	10.8	15.7	12.3	<<	Extensive development of skills in this area may be required
Active Learning	8.7	15.0	10.1	<<	Extensive development of skills in this area may be required

Judgment and Decision Making	9.4	13.2	10.1	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	13.1	10.5	<	A higher skill level may be required
Mathematics	6.2	12.6	9.4	<<	Extensive development of skills in this area may be required
Learning Strategies	7.2	12.2	6.4	<<	Extensive development of skills in this area may be required
Systems Analysis	6.5	11.0	8.3	<<	Extensive development of skills in this area may be required
Systems Evaluation	6.4	10.5	7.2	<<	Extensive development of skills in this area may be required
Management of Material Resources	3.7	6.6	4.6	<<	Extensive development of skills in this area may be required
Programming	2.2	5.1	4.5	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 92			
Focus Occupation: Biological Technicians (19-4021) Associated Occupation: Biological Scientists, All Other (19-1029)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	18.5	11.8	<<	Extensive improvement in abilities may be required
Oral Comprehension	12.5	17.9	12.5	<<	Extensive improvement in abilities may be required
Written Expression	9.8	17.9	11.6	<<	Extensive improvement in abilities may be required
Oral Expression	12.4	17.1	11.1	<<	Extensive improvement in abilities may be required
Inductive Reasoning	10.2	16.1	12.6	<<	Extensive improvement in abilities may be required
Deductive Reasoning	10.6	15.6	11.7	<<	Extensive improvement in abilities may be required
Problem Sensitivity	11.1	14.4	11.3	<<	Extensive improvement in abilities may be required
Near Vision	11.1	13.9	13.9	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	13.3	10.1	<<	Extensive improvement in abilities may be required
Category Flexibility	9.0	13.2	11.5	<	Some improvement in abilities may be required
Number Facility	6.3	11.8	8.7	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 84

Focus Occupation: Biological Technicians (19-4021)
Associated Occupation: Biological Scientists, All Other (19-1029)

Tools and Technologies	Exclusivity
Autoclave and sterilizer equipment and accessories	12
Business function specific software	1
Chemical evaluation instruments and supplies	10
Chromatographic measuring instruments and accessories	16
Clinical and diagnostic analyzers and accessories and supplies	18
Computers	1
Content authoring and editing software	1
Data management and query software	1
Electrochemical measuring instruments and accessories	9
General laboratory glassware and plasticware and supplies	13
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory baths	24
Laboratory centrifuges and accessories	13
Laboratory cooling equipment	25
Laboratory electrophoresis and blotting system and supplies	26
Laboratory enclosures and accessories	17
Laboratory heating and drying equipment	13
Laboratory incubating equipment	20
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory ovens and accessories	15
Laboratory water purification equipment and supplies	29
Libraries and related materials	70
Pipettes and liquid handling equipment and supplies	16
Spectroscopic equipment	10
Test Tubes	26
Viewing and observing instruments and accessories	4
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.